\$/194/61/000/006/050/077 D201/D302

AUTHOR:

Tyutin, A.A.

TITLE:

Radioelectronic method of laminar and volume radio-

graphy

PERIODICAL:

Referativnyy zhurnal. Avtomatika i radioelektronika, no. 6, 1961, 6, abstract 6 E36 (Elektronika v medit-sine, M.-L., Gosenergoizdat, 1960, 361-376)

A method is considered of interpreting a radiogram obtained from X-raying a certain object by plane X-ray in a certain prescribed manner. The block diagram of a computer arrangement for this purpose is suggested. The X-ray photograph is scanned by a light beam from a low after-glow CRT. The receiver is a photoelectron multi-plier. The output of the latter is applied to the input of an analogue computer with an integrator as its basic element. New diagnostic possibilities of this method are considered. _ Abstracter's note: Complete translation /

Card 1/1

TYUTIN, A.A., inzh.; FROLKIN, V.T.; MARKUS, G.V.

In regard to V.T.Frolkin and G.V.Markus' article. Izv. vys. ucheb. zav.; radiotekh. 4 no.1:118-119 Ja-F '61. (MIRA 14:4)

1. Institut elektrotekhniki AN USSR (for Tyutin). (Amplifiers (Electronics))

31981 5/142/61/004/004/002/018 E192/E382

9,3230 (1139,1040)

AUTHOR: Tyutin, A.A.

TITLE: Determination of the parameters of an equivalent quadripole by means of a multipole circuit matrix

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy.

Radiotekhnika, v. 4, no. 4, 1961, 398 - 405

TEXT: A method is considered of calculating the parameters of an equivalent quadripole by using the parameters of the matrix of the original circuit (network). This is based on the principle of separating the group of m coordinates from a set of n independent coordinates. It is assumed that a multipole (original) network is described by a matrix of generalized parameters W. The relationship between the dependent and independent variables of the system can therefore be described by the matrix equation:

 $Q = WX \tag{2}$

where Q is the column matrix of the independent variables (drive vector),

Card 1/4

31981 \$/142/61/004/004/002/018 E192/E382

Determination of the

X is the column matrix of the dependent variables (unknown vector) and

W is the square matrix of the order n of the generalized parameters of the network.

If m independent coordinates are separated from n independent coordinates and n-m components of the drive vector Q are equal to zero, the matrix equation of the system is in the following form:

 $Q^{q} = W^{q} X_{q}$ (2)

where Q' is a new drive vector identically equal to Q, since only m of the n components of the vector Q are not equal to zero,

X₁ is an m-dimensional vector whose components are to be determined,

W¹ is the normalized matrix which can be determined from the formula:

Card 2/4

31981 S/142/61/004/004/002/018 E192/E382

Determination of the

$$W' = W_{11} - W_{12}W_{22}^{-1} W_{21}$$
 (3)

Matrices W_{iK} in the above can be determined from the original matrix W by separating its first m rows and columns by vertical and horizontal lines. Eq. (3) is used for determining the formulae for evaluating the equivalent parameters of the quadripoles. A common-base quadripole (three-terminal network) is first considered and formulae for its normalized matrix are derived. The same procedure is followed for an interconnecting quadripole and the resulting formulae are used to determine the parameters of an equivalent quadripole on the basis of the admittance matrix of the original network. It is shown that if the equivalent circuit is in the form of a common-base quadripole, its equivalent parameters coincide with the corresponding elements of the normalized matrix. On the other hand, if the circuit is in the form of an interconnecting quadripole, calculation of the equivalent parameters is carried out in two stages: first, the elements of the normalized matrix W' are determined and,

Card 3/4

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001857810005-6"

31981 S/142/61/004/004/002/018 E192/E382

Determination of the

secondly, the parameters of the equivalent quadripole are evaluated from the normalized matrix.

There are 2 figures and 3 Soviet references.

ASSOCIATION:

Kafedra radioperedayushchikh ustroystv Kiyevskogo ordena Lenina politekhnicheskogo instituta (Department of Radio-transmitting Equipment of Kiyev Order of Lenin Polytechnical Institute)

SUBMITTED:

July 1, 1960

Card 4/4

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001857810005-6"

Concerning a certain method for reducing multiterminal networks to

Concerning a certain method for reducing martite arrange and an equivalent four-terminal network. Radiotekhnika 17 no.3:10-19 mr 162. (MIRA 15:2)

l. Deystvitel'nyy chlen Nauchno-tekhnicheskogo obshchestva radiotekhniki i elektrosvyazi imeni Popova. (Electric networks) (Equivalent circuits)

TOLIMANCHUK, L.F.; TYUTIN, A.A.

Inverse function generator using diode elements. Izv. vys. ucheb. zav.;

(MIRA 16'3)

radiotekh. 6 no.1:24-32 Ja-F '63.

l. Rekomendovana kafedroy vychislitel'noy tekhniki Kiyevskogo ordena
Lenina politekhnicheskogo instituta.
(Oscillators, Transistor)

(Pulse techniques (Electronics))

NESTERENKO, A.D. (Kiyev); KARPENKO, V.P. (Kiyev); TIUTIN, A.A. [Tiutin, A.O.]
(Kiyev)

Convergence and sensitivity of four-arm bridge circuits. Avtomatyka
9 no.6:64-68 '64. (MIRA 18:1)

Determination and use of secondary parameters in the method of subsidiary circuits. Mat. mod. 1 elek. tsepi no.1:226-237 (MIRA 16:11)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001857810005-6"

TURKIN, A.N., insh.; TYUTIN, Ye.V., insh.

Operation of feed pumps with superhigh pressures and hydraulic clutches. Elek. sta. 33 no.7:21-27 Jl '62. (MIRA 15:8) (Electric power plants—Equipment and supplies) (Pumping machinery, Electric)

TyuTin, A.O.

16.6800

82436 \$/102/60/000/02/03/005 0111/0222

AUTHOR:

R: Tyutin, A.O.

٩٠

TITLE:

Computing Amplifier for a Specialized Integrator With Periodization of the Solution

PERIODICAL: Avtomatika, 1960, No., pp.50-61

TEXT: For the experiments carried out according to the method of Tetel'baum, S.I., Corresponding Member of the Academy of Sciences Ukr.SSR (Ref. 1) the author uses a wide-band computing amplifier described by D.M. Mac-Kay (Ref. 2) and P. Davis (Ref. 3). In the present paper the author gives a theoretical investigation of the device. The author's investigation method bases on the consideration of the transient responses as well as on the consideration of the especial problems of the device, e.g. performance of mathematical operations at video signals. The method of V.S. Sigorskiy (Ref. 4) is used and recommended to be especially effective. The author proposes a scheme for the calculation of the device for a prescribed linear range of variations of the output voltage and the boundary frequency of the working range.

Card 1/2

Computing Amplifier for a Specialized Integrator With Periodization of the Solution

82436 \$/102/60/000/02/03/005 C111/C222

There are 4 figures and 10 references : 6 Soviet ar: 4 American.

X

ASSOCIATION: Institut elektrotekhniky AN URSR (Electrotechnical Institute of the Academy of Sciences Ukr SSR)

SUBMITTED: October 12, 1958

Card 2/2

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001857810005-6"

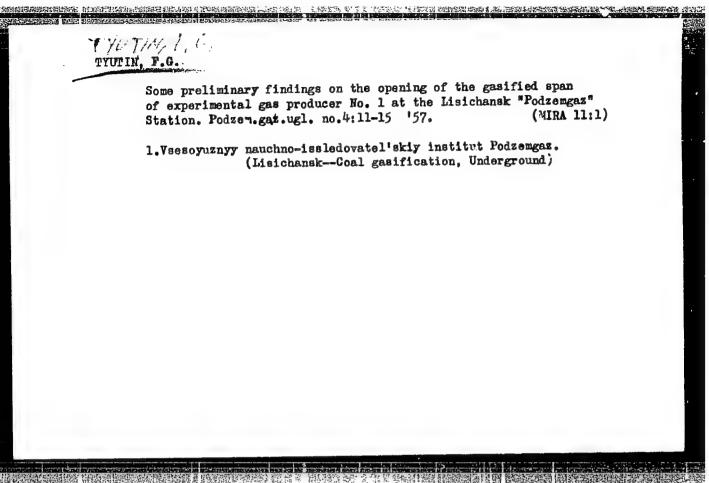
 YUTIN,	F.G., kand.tekhn.nauk	م م	
	Profile and total gasification is cool seams at the distance station in Yuzhnowablnskaya, and the afficient is sub- of boreholes. Trudy VNNIPodzemgaza no.13:53-50 [67.	(MIRA 1858)	
	1. Laboratoriya gornoger ogicheskaya Vassoyana, go nad in wataliskogo instituta podzem ny gozifikatali ngley.		

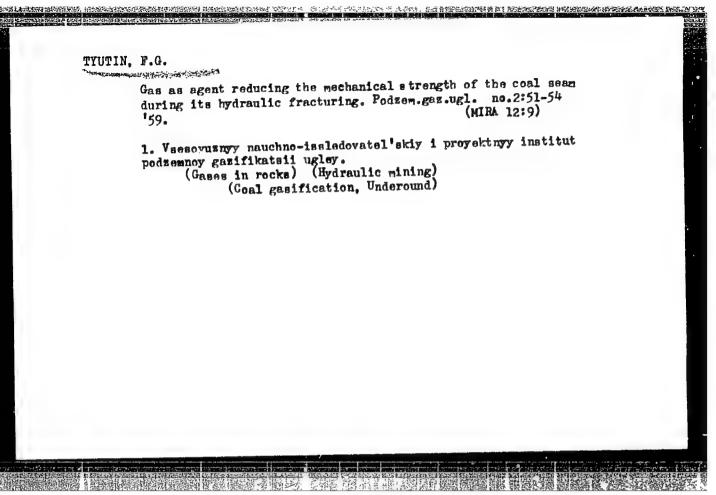
TYUTIN, F.G. (Moscow)

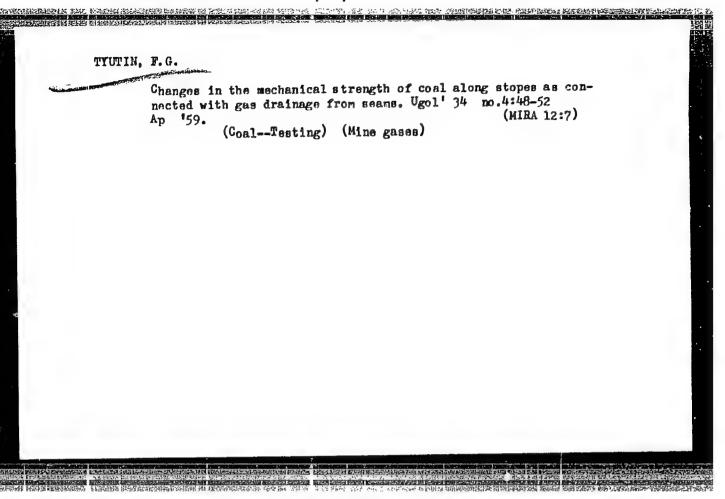
Changes in mechanical strength of coal depending on the time of degasification caused by free liberation of gas. Izv. AN SSSR.

Otd.tekh.nauk no.8:147-149 Ag '58. (MIRA 11:9)

1. Institut gornogo dela Akademii nauk SSSR. (Coal--Testing)







TYUTIN, F. G. Cand Tech Sci -- (diss) "Variation of the mechanical strength of coal inspelation to its saturation with gas." Mos, 1959. 17 pp (Inst of Mining, A cad Sci USSR), 150 copies (KL, 48-59, 115)

-35-

TYUTIN, F.G.

Underground investigation of the hydraulically fractured zone along the 1, soan at the Lisichansk "Podsemgas" Plant. Podzem. gaz.ugl. no.4:22-25 '59. (MIRA 13:4)

1. Vsesoyuznyy nauchno-issledovateliskiy institut Podzemgaz. (Lisichansk---Coal gasification, Underground)

Tyutin, F. G. (Moscow) AUTHOR:

SOV/24-58-8-30/37

MARKES STATEMENT OF THE STATEMENT OF STATEME

TITLE:

Variability of the Mechanical Strength of Coals Depending on the Time they were Allowed to Become Degassed under

Conditions of Free Gas Emission (Izmenyayemost' mekhanicheskoy prochnosti ugley v zavisimosti ot vremeni degazatsii ikh pri svobodnom vydelenii gaza)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1958, Nr 8, pp 147-149 (ÚSSR)

ABSTRACT: Although the question of sudden outbursts of coal and gas has been of special significance, the quantitative side of the phenomenon has not been sufficiently investigated. The formulae deduced in the works of S. A. Khristianovich (Ref 6) and that of A. A. Nikol'skiy (Ref 3) do not account for the fact that in some instances the sudden outburst of gas and coal would not occur at all and that it is necessary to take into consideration the parameters that characterize the variability of the strength of coal on its degasification. Consequently laboratory experiments (Refs 6 and 7) could not suffice as they did not reflect natural geological and industrial pit-work conditions.

Card 1/3 In this paper the author presents the results of experiments

SOV/24-58-8-30/37

Variability of the Mechanical Strength of Coals Depending on the Time they were Allowed to Become Degassed under Conditions of Free Gas Emission

obtained under natural conditions in shafts and conducted according to the method proposed by M.M. Protodyakonov (Ref 4). In Tables 1 and 2 are given the names of shafts and the aggregates of the seams worked. The specimens of coal taken directly from the coal face are termed "fresh", the others, taken after a lapse of time, differing in each particular instance are termed "degasified". Mathematical relations are derived for calculating the mechanical strength coefficients and graphs are included expressing the strength variation as a function of the degassing time. Eq.(6), p.149, expresses the relation between the strength coefficient of coal, the degassing time and the gas saturation. An increase in the strength of the coal with the progress of degassing is due to a weakening of the wedging effect of the molecules of the free and of the adsorbed gases on the walls of the fine cracks in the coal. With increasing gas removal the molecular forces of cohesion Card 2/3 between the walls of the micro-cracks become stronger

SOV/24-58-8-30/37 Variability of the Mechanical Strength of Coals Depending on the Time they were Allowed to Become Degassed under Conditions of Free Gas Emission

and this may lead to the closing up of these cracks. There are 5 figures, 2 tables and 8 references, all of which are Soviet.

ASSOCIATION: Institut gornogo dela Akademii nauk SSSR (Institute of Mining, Ac.Sc., USSR)

SUBMITTED: July 27, 1957

Coal--Mechanical properties
 Coal--Degasification
 Coal--Sampling
 Coal--Test_regults
 Mathematics

Card 3/3

TYUTIN, F. G. Cand Tech Sci -- (diss) "Modification of certain mechanical as a function of their [35] "
properties of coals according to the saturation, with gas." Mos, 1956. 16 pp 20 cm.
(Inst of Mining Industry, Acad Sci USSR), 100 copies (KL, 14-57, 87)

-23-

TYDTIN, F.G.

Distribution and state of alag and filling material in burnt-out areas. Podran. gaz. ugl. no. 2:25-33 '58. (HEMA 11:7)

1. Vaesoyuznyy mauchno-issledovatel'skiy institut Podzengaz. (Coal gasification, Underground)

VASIL'YEV, K.F.: TYUTIKOV, G.T.

Method of calculating pressure hydraulic coal conveying recommended by the All-Union Scientific Research and Design and Construction Institute for Hydraulic Coal Mining. Trudy VNIIGidrouglia no.4:66-72 '64. (MIRA 18:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy i proyektnokonstruktorskiy institut dobychi uglya gidravlicheskim sposobom.

TYUTIN, I., inzh.

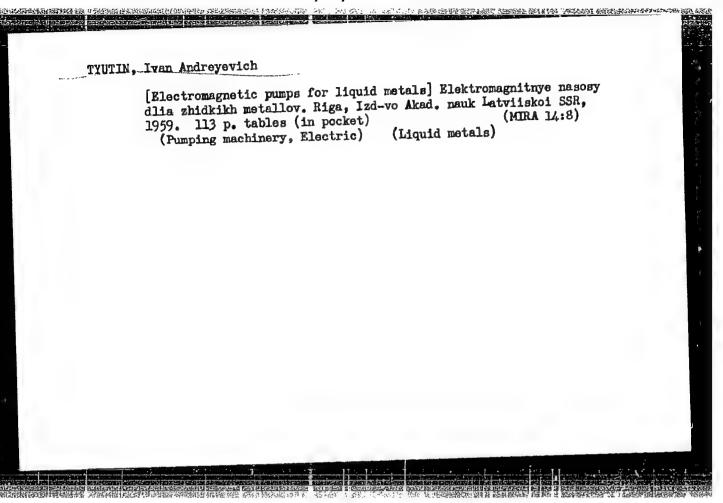
Dry cargo motorship "Novyy Donbass." Mor.flot 22 no.12:37-38
(MIRA 15:12)

1. Upravleniye po zakazam i nablyudeniyu za stroitel'stom flota
Ministerstva morskogo flota.
(Freighters)

TYUTIN, I., starshiy inzh.

New perisable-dry-goods freighter. Mor. flot 21 no.9:28-29
S *61.

1. Upravleniye po zakazam i nablyudeniyu za stroitel*stvom
flota Ministerstva morskogo flota.
(Ships--Cargo)



TYUTIN 1. F.

ALATORTSEV, S.A., prof., doktor tekhn.nauk; ANDREYEV, A.V., kand.tekhn. nauk; ANCHAROV, I.L., inzh.; BALINSKIY, S.I., inzh.; BELOUSOV, V.G., inzh.; VINNITSKIY, K.Ye., kand.tekhn.neuk; VLASOV, V.M., inzh.; VORONTSOV, N.P., kand tekhn nauk; GIPSMAN, M.K., inzh.; GLUZMAN, I.S., kand.tekhn.nauk; GJR'YKV, S.V., kand.tekhn.nauk [decessed]; DEMIN, A.M., kand.tekhn.nauk; YEGURNOV, G.P., kand.tekhn.nauk; YEFIMOV, I.P., inzh.; ZHUKOV, L.I., kand.tekhn. nauk; ZEL'TSER, N.M., inzh.; KOSACHEV, M.N., kand.tekhn.nauk; KOTOV, A.F., inzh.; KUDINOV, G.P., inzh.; LAPOVENKO, N.A., kand. tekhn.nauk; MAZUROK, S.F., inzh.; MEL'NIKOV, N.V.; MUDRIK, H.G., inzh.; NIKONOV, G.P., kand. tekhn. nauk; ORLOV, Ye.I., inzh.; POTAPOV, M.G., kand.tekhn.nauk; PRISEDSKIY, G.V., inzh.; RZHEVSKIY, V.V., prof., doktor tekhn.nauk; RYAKHIN, V.A., kond. tekhn.nauk; SIMKIN, B.A., kand.tekhn.nauk; SITNIKOV, I.Ye., inzh.; SOROKIN, V.I., inzh.; STASYUK, V.N., kend.tekhn.nauk; STAKHEVICH, Ye.B., inzh.; SUSHCHERKO, A.A., inzh.; TYUTIN, I.F., inzh.; TYMOVSKIY, L.G., inzh.; FISENKO, G.L., kand. tekhn. nauk; FURMANOY, B.M., inzh.; SHATAYEV, M.G., inzh.; SHESHKO, Ye.F., prof., doktor tekhn.nauk; TERPIGOREV, A.M., glavnyy red. [deceased]; (Continued on next card)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001857810005-6"

ALATORTSEV, S.A.——(continued) Card 2.

KIT, I.K., zamestitel' glavnogo red.; SHESHKO, Ye.F., zamestitel' otv.red.; BUGOSLAVSKIY, Yu.K., red.; BYKHOVSKAYA, S.W., red.; DIONIS'YEV, A.I., kand.tekhn.nauk, red.; KOZIN, Yu.V., red.; SOKOLOVSKIY, M.M., red.; YASTREBOV, A.I., red.; DEMIDYUK, G.P., kand.tekhn.nauk, red.; KRIVSKIY, M.N., kand.tekhn.nauk, red.; LYUBIMOV, B.N., inzh., red.; MOLOKANOV, P.L., inzh., red.; REISH, A.K., inzh., red.; RODIONOV, L.Ye., kand.tekhn.nauk, red.; SLA-VUTSKIY, S.O., inzh., red.; TRAKHMAN, A.I., inzh., red.; TRYMOV-SKIY, L.G., inzh., red.; FIDELEV, A.S., doktor tekhn.nauk, red.; SHUKHOV, A.N., kand.tekhn.nauk, red.; TER-IZRAEL'YAN, T.G., red.; izd-va; PROZOROVSKAYA, V.L., tekhn.red.; KONDRAT'YEVA, M.A., tekhn.red.

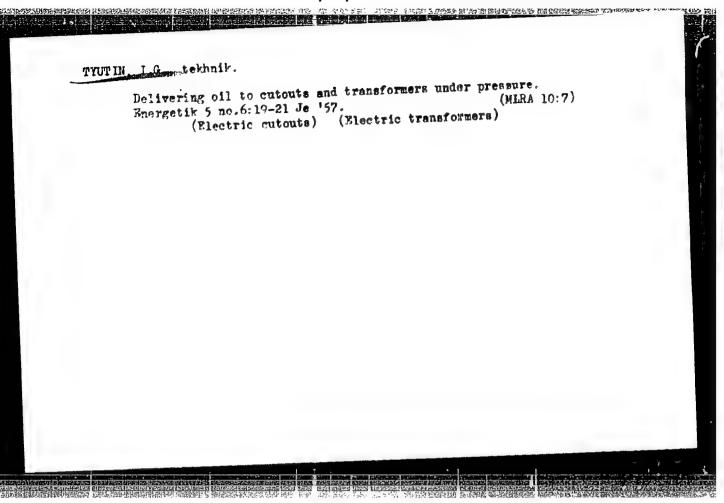
ALATORTSEV, S.A.——(continued) Card 3.

[Mining; an encyclopedic dictionary] Gornoe delo; entsiklopedickeskii spravochnik. Glav.red.A.M.Terpigorev. Chleny glav.red.A.I.Barenov i dr. Moskva, Gos.neuclano-tekim.izd-vo lit-ry po gornomu delu. Vol.10. [Mining coel deposits by the open-cut method] Razrabotka ugol'nykh mestorozhdenii otkrytym sposobom. Redkollegiia toma; N.V.Mel'nikov i dr. 1960. 625 p.

(MIRA 13:2)

1. Chlen-korrespondent AN SSSR (for Mel'nikov).

(Goal mines and mining) (Strip mining)



方法。1925年6月2日 2020年2月2日 2020年2月2月2日 2020年2月2日 2020年2月2月2日 2020年2月2

TYUTIN, I.S.

Motorships of the type "Beloretsk." Biul. tekh.-ekon.inform.
Tekh. upr. Min. mor. flota 7 no.5:28-36 162. (MIRA 16:3)

1. Starshiy inzhener Upravleniya po zakazam i nablyudeniyu za stroitel'stvom flota. (Motorships)

L 16506-65 ENT(m) DIAAP/SD(dp)/ESD(t)/SSD/AFWL/ASD(a)-5

ACCESSION NR: AP5000339

S/0056/64/047/005/1826/1828

AUTHORS: Gaponov, Yu. V.; Tyutin, I. V.

TITLE: Inelastic scattering of neutrinos by deuterons

BOURCE: Zhurnal eksperimental noy i teoreticheskoy fiziki, v. 47, no. 5, 1964, 1826-1828

TOPIC TAGS: neutrino, deuteron scattering, inelastic scattering, differential cross section

BSTRACT: In view of the physical feasibility of low-energy experients dealing with the possible existence of a neutral neutrino current in the universal weak-interaction Hamiltonian, the authors use with a Hamiltonian to estimate theoretically the cross section for

and Pistates of the original

Cara 1/2

L 16506 -65 ACCESSION NR: AP5000339

5

approximations of the allowed and forbidden transitions, resulting from the expansion of the exponential in the matrix element, are the same as for β decay. Plots of the differential cross section as a function of the relative energy of motion and tables of the cross sections as functions of the total reaction energy are presented. "The authors thank I. S. Shapiro for interest and for valuable advice. One of the authors (Yu. G.) is grateful to L. A. Mikaelyan, V. G. Vaks, and A. I. Larkin of the IAE im. I. V. Kurchatova for interesting discussions." Orig. art. has: 2 figures, 3 formulas, and 2 tables.

ASSOCIATION: None

SUBMITTED: 30Apr64

ENCL: 00

SUB CODE: NP

NR REF SOV: 006

OTHER: 003

Card 2/2

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001857810005-6"

GARLES, T.A.; TWOTH, L.V.

Inelastic scritering of neutrinos on deuterons. Thur. eksp. 1 teor.
fiz. 47 no.5:1826-1828 H '64.

(MIRA 12:2)

21 June

INDUCED RADIATIVE PROCESSES IN CLASSICAL AND QUANTUM THEORIES (USSR)

Uspekhi fizicheskikh nauk, v. 79, no. 4, Sobel'man, I. I., and I. V. Tyutin. \$/053/63/079/004/002/004 Apr 1963, 595-616.

It is shown that although induced emission is not a pure quantum effect, in the quasi-classical limit the transition from quantum formulas is quite unique. In particular, there is no classical analogue to the quantities determining the induced emission power and the absorption power. The authors point out that their analysis of induced emission in terms of classical theory is warranted by the recent interest in masers and because a general classical theory for the interaction of radiation of nonlinear oscillators with the field was never fully developed. The article deals with a systematic development of the classical theory of radiative processes, compares in detail the classical theory with the quantum theory, and shows that under certain conditions classical [CS] systems can amplify incident radiation.

Card 1/1

SOBEL'MAN, I.I.; TYUTIN, I.V.

Induced radiation processes in the quantum and classical theories.
Usp. fiz. nauk 79 no.4:595-616 Ap '63. (MIRA 16:3)
(Radiation) (Quantum theory)

ZAKHAROV, V.I.; TYUTIN, I.V.

The Ademollo-Catto theorem for an arbitrary SU(3)-multiplet. IAd. fiz. 2 no.4:705-709 0 '65. (MIRA 18:11)

l. Institut teoreticheskoy i eksperimental'noy fiziki Gosudarst-vennogo komiteta po ispol'zovaniyu atomnoy energii SSSR.

Parton bearing I.V.

Baryon-beryon scattering at low energies, and SU(o)-symmetry. Ted. fiz. 2 no.54918-921 N 165.

1. Institut eksperimentel'nog i teoretich/skoy fiziki theudarsivannego komiteta pa ispol'zovanigu atomnog energii

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001857810005-6"

L 11888-66 EWT(m)/T/EWA(m)-2 ACC NR, AP5028020 SOURCE CODE: UR/0386/65/002/c08/0383/0387 1/21 AUTHOR: Zakharov, V. I.; Tyutin, ORG: none TIME: Effect of mass splitting within the baryon octet on BB scattering SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Fis'ma v redaktsiyu TOPIC TAGS: quantum electrodynamics, strong nuclear interaction, strange particle, ABSTRACT: The authors shown that an account of the baryon mass difference can qualitatively change the baryon-baryon scattering picture even if the influence of broken unitary symmetry is neglected. This is illustrated with the two-channel Ap scartering reaction with zero spin $\Lambda p \to \Lambda p$; $\Lambda p \to (\Sigma N) \frac{1}{T=1/2}$, where $(\Sigma N) \frac{1}{T=1/2} = \sqrt{1/3} \frac{\Sigma p}{L}$ with as an example. A simple model of the interaction is considered, with unitary symmetry and zero force radius. It is shown that in the limit of SU(3) symmetry there is only one common level in the systems Ap and (EN)T=1/2. If these systems are analyzed in the same manner even after account is taken of the mass difference, there are no grounds for expecting the level to be located at one of the thresholds, or the appearance of two levels (in Ap and (EN) Tel/2 scattering). The existence of a virtual Ap level in the model in question can be explained only by the fact that the interaction is resonant in some irreducible representations of SU(3). Such a Card 1/2

character of the interest teraction, for example unified in a single supeffective scattering rathe derivations, it is tary symmetry in the baptained in the SU(3)-scarev for numerous useful SUB CODE: 20/ SUEM 1	ermultiplet. Aldius, which are seen even from tryon masses can metry approximal discussions.	though inclusion small in the rea he discussed exa- qualitatively che	of terms corresp case, could gre- ple that the bre- ange the BB-scatt are grateful to I. 5 formulas.	ntations are onding to the atly change aking of uni-
H(L)				

USSR/ Miscellaneous - Botany
Card 1/1 Pub. 86 - 17/40
Authors : Tyutin, M. G.
Title : Tropical fruit

Periodical : Priroda 3, 91-92, Mar 1954

Abstract : The planting of tropical fruit trees (Solanum muricatum), imported from Peru and other South American countries, is announced.

Institution: The Scientific Testing Station, Simferopol

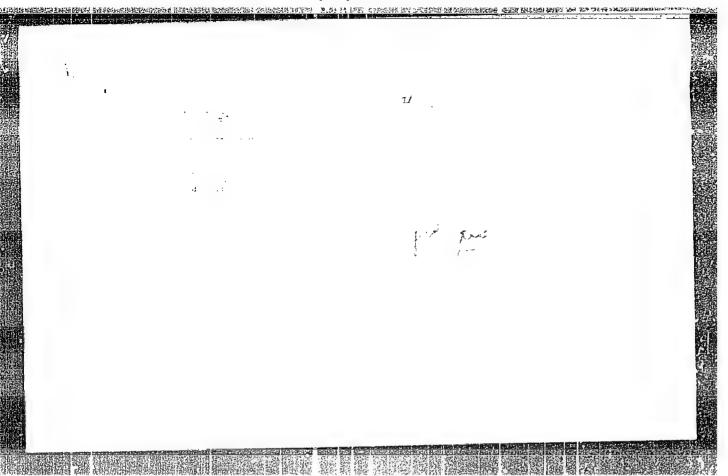
Submitted :

Tropical fruit (Solanum muricatum). Priroda 43 no.3:91-92
Mr '54. (MERA 7:3)

1. Simferopol'skaya opytno-selektsionnaya stantsiya. (Tropical fruit)

- 1. TYUTIN, M. G.
- 2. USSR (600)
- 4. Sweet Potatoes
- 7. The sweet potato, a forgotten crop. Sad i og. no. 11, 1952.

9. Monthly List of Russian Accessions, Library of Congress, March 1953, Uncl.



	R: AP6000889 SOURCE CODE: UR/0181/65/007/012/36	82/3684
	RS: Arkhangel'skaya, V. A.; Nikitinskaya, T. I.; Tyuti	n, M. S.
ORG: TITLE cryst	: Effect of oxygen on the lonic conductivity of fluorite	B B
SOURC	E: Fizika tverdogo tela, v. 7, no. 12, 1965, 3682-3684	•
TOPIC ducti	TAGS: calcium fluoride, electric conductivity, impurity vity, crystal lattice vacancy, temperature dependence	y con-
ABSTR of Ca	ACT: The authors report an observed change in tonic conductive arystals when 0^2 tons are introduced in the lattice.	The
proce one o 1961)	dure and research apparatus were described in earlier paper the authors (Nikitinskaya, FTT v. 1, 835, 1959; v. 3, 3). The investigations were made at temperatures 350 650 ion where the conductivity of CaF ₂ is sensitive to structure.	ers by 3224, OK. in
Card	1/2.	

I. 11,122-66 ACC NR: AP6000889

The temperature dependence of the ionic conductivity of CaF with or without rare-earth impurities (Er³⁺, Ho³⁺, Sm³⁺, and Dy³⁺), in concentrations up to 1.0 mol.%, can be described by the relation $\sigma = \sigma_0$ exp (-u/kT), where u = 23 kcal/mole = 1.0 ev for all the investigated samples. The fact that impurities do not affect the variation of the conductivity indicates that in the temperature region 350 -- 600K the conductivity is governed by anion vacancies, and not by interstitial anions. These vacancies are in all probability produced by the 0²⁻ introduced in the crystal. The presently available data are insuf-

introduced in the crystal. The presently available data are insufficient to explain all the results. Orig. art. has: 2 figures and 1 formula.

SUB CODE: 20/ SUBM DATE: 10Ju165/ ORIG REF: 005/ OTH REF: 005

Card 2/2

TYUTIN, N.

PA 28/L9T18

USSR/Engineering

Oct 48

Automobiles

Trucks - Performance

"A Few Observations on the GAZ-51 Automobile," N. Tyutin, L. Reznik. Engineers, 21P

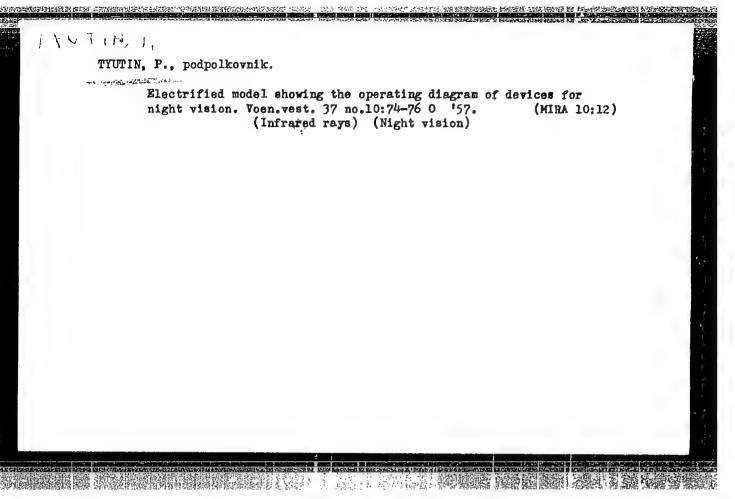
AND THE PARTY SOUTH TO SEARCH SECTION OF THE PARTY OF THE

MAVE omobilities No. 10:

Thereods no doubt that the GAZ-51 is a better truck than those manufactured in foreign countries for similar purposes. Truck operates well as a unit. However, individual parts need improvement. Performance of axles, particularly for front wheels, must be improved.

FDB

28/49T18



TYUTIN, P.I.; KOZHEVNIKOVA, Ye.P. (Sverdlovsk)

Use of a petrographic method for the study of mineral particles in animal tissues and urine after the introduction of quartz-containing dust. Arkh.pat. 23 no.4354-61 61. (MIRA 14:6)

1. Iz kafedry patofiziologii (zav. - prof. Ya.G. Uzhanskiy)
Sverdlovskogo meditsinskogo instituta (dir. - prof. A.F.
Zverev) i Berezovskoy opytnoy stantsii po bor'be s silikozom
(dir. N.N. Liberman [deceased]) Instituta gigiyeny truda i
profzabolevaniy AMN SSSR (dir. - deystvitel'nyy chlen AMN SSSR
prof. A.A. Letavet).

(FOREIGN BODIES) (LUNGS-DUST DISEASES)

TYUTIN, P.I., petrcgraf

Using the petrographic method to determine the miner composition, dispersion, and specific surface of dusts. Sbor. rab. po. silik. no.3: 147-153 *61. (MIRA 15:10)

l. Berezovskaya opytanaya nauchno-issledovatel'skaya stantsiya pobor'be s silikozom Instituta gigiyeny truda i professional'nykh zabolevaniy AMN SSSR.

(Mine dusts--Analysis)

TYUTIN, P.I., petrcgraf

Composition of mine dusts and ash from the lungs of silicotaberculosis patients. Sbor. rab. po silika no.3:129-146 '61. (MIRA 15:10)

l. Berezovskaya nauchno-issledovatel'skaya stantsiya po bor'be s silikozom instituta gigiyeny truda i professional'nykh zabolevaniya AMN SSSR.

(TUBERCULOSIS) (LUNGS DUST DISEASES) (MINE DUSTS ANALYSIS)

PETROSYAN, G.A., inzh.; TYUTIN, S.A., inzh.; MATVEYEVA, V.T., inzh.; SARANCHA, A.P., inzh.

Concerning E.F.Kirpichev and A.P.Koniaev's article "Results f testing MP-VTI ash collectors having scrubbers with 4,100 mm. diameter." Teploenergetika 11 no.2:96 F '64. (MIRA 17:4)

TIUTIN, SERGEI PETPOVICH.

The U.S.S.R., an economic and social survey, with 8 maps, 18 diagrams and 67 statistical tables. 2d ed., rev. and enl. London, Merhuen& co., [1945]. 234 p. incl. illus. (maps) tables, diagrs, (1 fold)

"First published, June15th 1944".

Chapter 3 contains data on the most important ports of the Elack, Azov and Caspian sea; on Arctic and Pacific oceans and Valtic sea, complete with maps.

DLC: HC335/T727 1945

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress, Reference Department, Washington, 1952, Unclassified

TEHENT'YEV, M.L.; OSAD'KO, M.P.; BRAGINSKIY, B.I.; SLOBODIN, V.M.; PISHAN, Z.A.; LEVIN, I.Ye.; TSYNKOV, M.Yu.; BADIR'YAN, C.G.; TYITIH, V.A.; ABRAMOV, V.A.; FRAYRR, S.V.; KOSCHIKOVA, I.A.; KARNAUKHOVA, G.I.; OBOLMISKIY, K.P.; IL'IN, S.A.; CAVRILOV, V.I.; FREYDMAN, S.M.; KALASHNIKOVA, V.S., redaktor; IAPIDUS, M.A., redaktor; RAKITIMA, Ye.D., redaktor; FEDOTOVA, A.F., tekhnicheskiy redaktor

[Manual for students of collective farm economy] V pomoshch' izuchaiushchim ekonomiku kolkhozov. Moskva, Gos. izd-vo selkhoz. lit-ry, 1956. 423 p. (MIRA 10:1)

(Gollective farms)

ELECTRICAL CONTRACTOR OF THE PROPERTY OF THE P

BADAR YAN, G.G.; TYUTIN, V.A.; CHEREMUSHKIN, S.D.; ZUZIK, D.T.;

KHODASEVICH, B.G.; FRAYER, S.V.; GUSAROV, Ye.I.; KAZANSKIY,

A.M.; KASSIROV, L.N.; KARAYEV, S.A.; AFRAMOV, V.A.;

VASIL'YEV, N.V.; BUGAYEV, N.F.; SAPIL'NIKOV, N.G.; KASTORIN,

A.A.; RUDNIKOV, V.N.; YAKOVLEV, V.A.; PEREMYKIN, V.I.;

ISAYEV, A.P.; KUZ'MICHEV, N.N.; IL'IN, S.A.; PROMIN, V.A.;

LUK'YANOV, A.D.; SHAKHOV, Ya.K.; IL'ICHEV, A.K., kand. sel'
khoz. nauk; KOGAN, A.Ya.; TSYNKOV, M.Yu.; BABIY, L.T.;

GORBUNOV, I.I.; KOVALEV, A.M.; ROMANCHENKO, G.R.; ERODSKAYA,

M.L., red.; IVANOVA, A.N., red.; GUREVICH, M.M., tekhn. red.;

TRUKHINA, O.N., tekhn. red.

[Economics of agriculture] Ekonomika sotsialisticheskogo sel'skogo khoziaistva; kurs lektsii. Moskva, Sel'khozizdat, 1962.
710 p.

(Agriculture—Economic aspects)

TYUTIN, V. A. 36272

Spetsializatsiya i razmeshcheniye kolkhoznogo proizvodstva v leningradskoy oblasti. Zapiski Leningr. s.-kh. IN-TA, V'P. 5, 1948, s. 3-17

SO: Letopis' Zhurnal'nykh Statey, No. 49, 1949

KOLOBONIN, 7.N.; BLOKH, G.A. [Biokh, H.A.], doktor khim.nauk; TYUTIN, V.A.

Effect of anilinephenol-formaldehyde resins on the electric properties of SKS-36 rubber. Khim.prom.[Ukr.] no.1:14-16

Ja-Mr *65.

(MIRA 18:4)

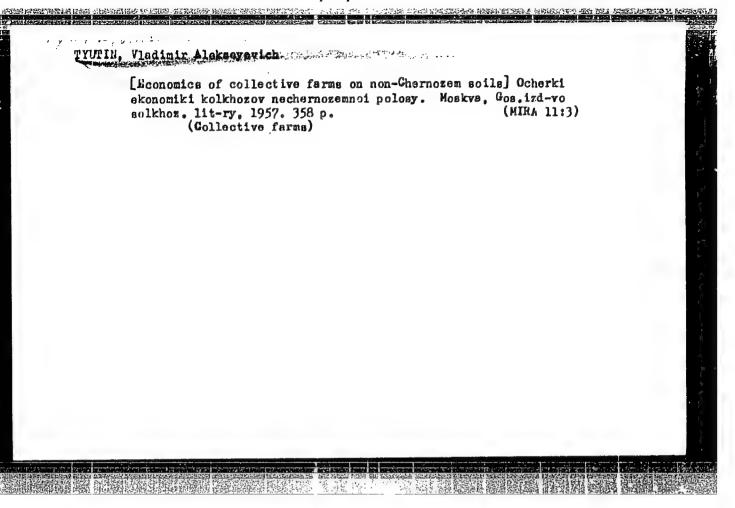
AREF'YEV, T.I., kand. ekon. nauk; BRASLAVETS, M.Ye., prof., doktor ekon. nauk; BROZGUL', M.M.; VLASOV, N.S., prof., doktor ekon. nauk; DUBROVA, P.F., doktor ekon. nauk; YESAULOV, P.A., kand. sel'khoz. nauk; ZAL'TSMAN, L.M., prof., doktor sel'-khoz. nauk; KAL'M, P.A., dotsent, kandidat sel'sko-khoz. nauk; KOSTSELETSKIY, N.A., kand. ekon. nauk; KRYLOV, V.S., kand. sel'khoż. nauk; LIEKIND, A.S., dots., kand. ekon. nauk; MAKAROV, N.P., prof., doktor ekon. nauk; OGLOBLIN, Ye.S., kand. sel'khoz. nauk; POLOVENKO, S.I., kand. ekon. nauk; POPOV, S.A., dots., kand. ekon.nauk; SAPIL'NIKOV, N.G., doktor ekon. nauk; TISHCHENKO, G.A., prof., kand. ekon. nauk; TYUTIN. V.A., prof., doktor ekon. nauk; YANYUSHKIN, M.F., kand. ekon. nauk; PYLAYEVA, A.P., red.; FREYDMAN, S.M., red.; SOKOLOVA, N.N.,

[Organization of socialist agricultural enterprises] Organizatsiia sotsialisticheskikh sel'skokhoziaistvennykh predpriiatii; kurs lektsii. Moskwa, Sel'khozizdat, 1963. 662 p.

1. Zaveduyushchiy otdelom ekonomiki Vsesoyuznogo nauchnoissledovatel'skogo instituta sakharnoy svekly (for Aref'yev). 2. Odesskiy sel'skokhozyaystvennyy institut (for Braslavets). (Continued on next card)

AREF'YEV. T.I. -- (continued), Gard ...

3. Moskovskaya seliskokhozysystvennaya ekademiya im. K.A.Timiryazeva (for Vlasov), 4. Zaveduvushchiv otdelom ekonomiki i organizatsii Nauchno-issiedovatel'skogo instituta sadovodstva im. I.V. Michurina (for Dubrova), 5. Moskovskay Gosudarstvennyy universitet im, M.V. Lomonosova (for Zalitsman. Polovenko). 6. Zaveduyushchiy kafedroy organizatsii seliskokhozyaystvennogo proizvodstva Leningradskogo seliskokhozyaystvennogo instituta (for Kal'm), 7. Zaveduyushchiy otdelom ekonomiki Nauchno-issledovateliskogo instituta ovoshchnogo khozyaystva (for Kostseletskiy). 8. Vsesoyuznyy nauchnoissledovatel'skiy institut ptitsevodstva (for Krylov). 9. Moskovskiy ekonomiko-statisticheskiy institut (for Libkind). 10. Vsesoyuznyy seliskokhozyaystvenniy institut zaochnogo obrazovaniya (for Makarov). 11. Zaveduyushchiy otdelom ekonomiki Krasnodarskogo nauchno-issledovatel'skogo instituta sel'skogo khozyaystva (for Ogloblin). 12. Kafedra organizatsii sel'skokhozyaystvennogo proizvodstva Leningradskogo sel'skokhozyaystvennogo instituta (for Popov). 13. Zaveduyushchiy kafedroy Sovetskoy ekonomiki Vysshey partiynoy shkoly (for Sapil'nikov). 14. Voronezhskiy sel'skokhozyaystvennyy institut (for Tishchenko). 15. Leningradskiy sel'skokhozyaystvennyy institut (for Tyutin). 16. Direktor Severo-Kavkazskogo filiala Vsesoyuznogo nauchnoissledovatel'skogo instituta ekonomiki sel'skogo khozyaystva (for Yanyushkin). (Agriculture--Economic aspects)



MINCHENKO, N.I., kand.tekhn.mauk; TIUTIN, V.I., ingh.

Ways of improving the performance of the gear transmission of traction motors. Trudy TSNII MF6 no. 202:71-115 '60.

(MIRA 13:12)

(Locomotives--Transmission devices)

TYUTIN, V.I., inzh.

Analyzing the work of elastic transmissions from a hollow staft to the wheel pair. Trudy TSNII MIE no.288:109-125 '65.

(MIRA 18:10)

TYUTIN, V.I., inzh.

Use of design data in evaluating the difficulty of repairing trailer cars of different design. Trudy TSNII MPS no.230:113-130 162.

(Locomotives-Maintenance and repair)

MINCHENKO, N.I., kand.tekhn.nauk; TYUTIN, V.I., inzh.

Lengthening the service life of locomotive gearings. Vest. TSHII
MPS 19 no.3:54-56 '60.
(Locomotives) (Gearing)

PRUSAKOVA, I.R.; TYUTIN, V.V.

Utilization of small timber at plywood factories. Der. prom. 12 no.7:12-14 Jl '63. (MIRA 16:8)

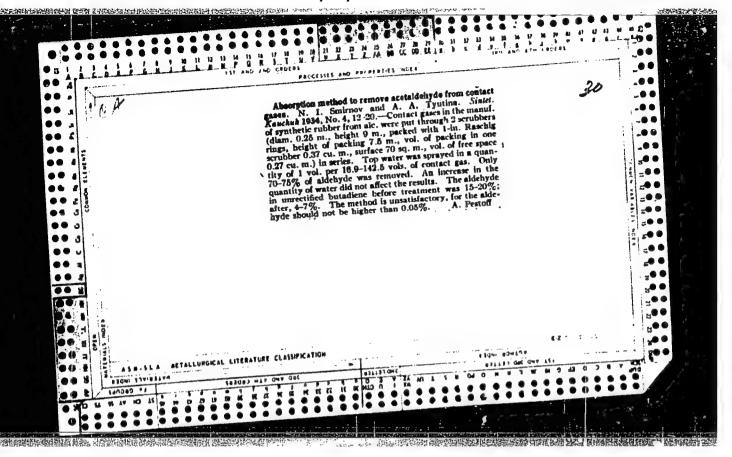
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mebeli.

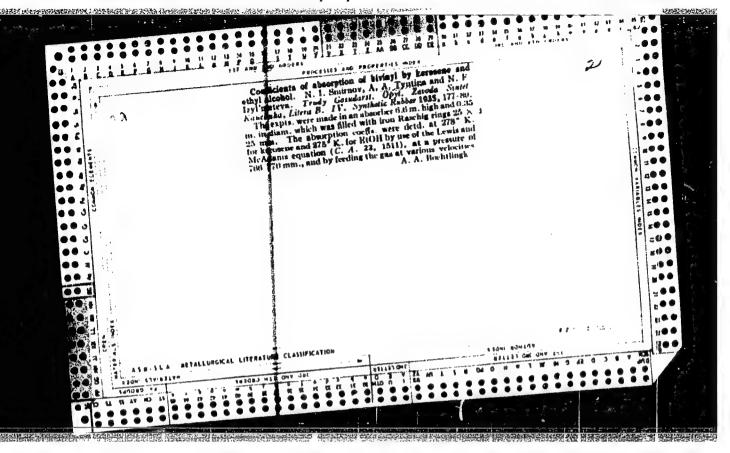
(Plywood industry)

TURKIN, A.N., inzh.; IZMALKOV, Yu.G., inzh.; KHAKHULIN, N.Ye., inzh.; TYUTIN, Ye.V., inzh.

Use of hydraulic clutches as direct controllers of once-through boilers. Elek. sta. 35 no.6:28-32 Je 164.

(MIRA 18:1)





5/137/61/000/011/113/123 A060/A101

AUTHORS:

Kudelya, Ye. S., Tyutina, A. Ye.

TITLE:

Determination of small quantities of aluminum in steel

PERIODICAL:

Referativnyy zhurnal. Metallurgiya, no. 11, 1961, 4, abstract 11K21 (V sb.: "Vopr. proiz-va stali", no. 8, Kiyev, AN USSR, 1961, 96 -

101)

Methods have been elaborated for determining 0.08 - 0.1% Al in steel with arc excitation of the spectrum under the following optimum conditions: the arc current 5 amps, analytic interval 2.5 mm, gap width 0.01 mm, stationary electrode - Cu rod 2.2 - 8 mm dia., time of preliminary roasting 30 - 40 sec. The mean relative error of the analysis is ±5 - 6%. To determine the Al in the steel by the analytic chemistry method the batch of steel shavings is dissolved in H2SO4. The solution filtered off is neutralized with NaOH up to pH 6.6. The precipitate formed is washed, dissolved in HNO3 and 30% HClO4, adding NaCl. The solution is boiled to remove Cr, in the form of a chromyl chloride, as well as Sn and As. The remainder is diluted with water up to 50 - 100 ml, the content is filtered to eliminate SiO2. The solution is poured into a hot solution of

Card 1/2

Determination of small quantities of aluminum in steel

S/137/61/000/011/113/123 A060/A101

NaOH (100 g/liter) to precipitate the hydrates of Pe, Ni, Cu, Ti, and Mn. The mixture is transferred into a 500-ml flask and after cooling it is filtered. To 250 ml of the filtrate one adds 10 ml of 15% solution of (NH4)2HPO4, 20 ml of 25% solution of NaCl, 10 ml of concentrated HCl, one neutralizes according to methyl red and thereupon adds NH40H up to the basic reaction of the solution. Later one adds a warm solution of ammonium acetate and keeps on the warm plate for 50 min. The solution obtained is filtered and an AlPO4 precipitate is obtained in the filter. The latter is washed and roasted at 1,000°C. The precipitate is weighed and the Al content is determined from its weight. There are 5

L. Vorob'yeva

[Abstracter's note: Complete translation]

Card 2/2

L 18061-63 EWP(q)/EWT(m)/BDS AFFTC/ASD Pad JD/HW/JG
ACCESSICN NR: AT3002169 S/2921/63/000/009/0073/0078

AUTHORS: Yemel'yanenko, Yu. G.; Prokhorenko, K. K.; Tyutina, A. Ye.

TITLE: Electrolytic extraction of nonmetallic inclusions from stainless steel

SOURCE: AN Ukr RSR. Viddil tekhnichnykh naul. Voprosy proizvodstva steli, no. 9,

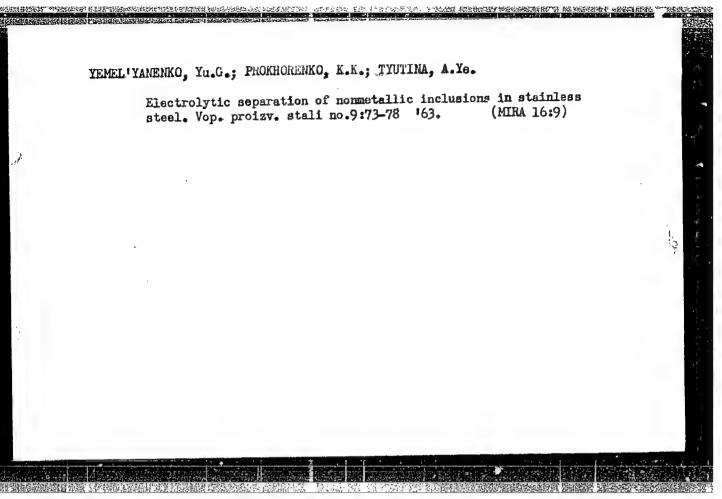
TOPIC TAGS: stainless steel, nonmetallic inclusion, electrolytic extraction

ARSTRACT: A new method for separating carbide inclusions from steel is discussed in detail. The method is based on the principle of a simultaneous solution of metal and carbide, which can be achieved by a proper choice of the electrolyte composition. A scheme for the device used in the experiment is presented, and the working procedure is explained. This method is characterized by the full preservation of the solution of carbides contained in steel. The carbide solution occurs because of the polarization of metallic surface and an increase in that the new method provides a rapid and accurate determination of oxide inclusions in stainless steel. Orig. art. has: 1 table and 3 figures.

Card 1/2

L 18061-63
ACCESSION NR: AT3002169
ASSOCTATION: none
SUBMITTED: OO DATE ACQ: 10May63 ENCL: OO
SUB CODE: ML NO REF SOV: OO1 OTHER: OOO

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001857810005-6"



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TYUTINA, K.M.

TYUTINA, K.M.: "Investigation of electrode processes in the precipitation of lead-nickel slag". Moscow, 1955. Min Higher Education USSR. Moscow Order of Lenin Chemicotechnological Inst imeni D.I. Mendeleyev. (Dissertations for the Degree of Candidate of Technical Sciences).

SO: Knizhnaya letopis' No 45, 5 November 1955. Moscow.

LYSTINA, K. Al.

20-3-44/59

AUTHORS

Tyutina, K. M., and Kudryavtsev, N. T.

TITLE

Note on the Electrolytic Deposition of a Tin-Nickel Alloy from Chloride-Fluoride Solutions (Elektroliticheskoye osazhdeniye splava olovo-nikel' iz khlorid-ftoridnykh rastvorov).

PERIODICAL

Doklady Akademii Nauk, 1957, Vol. 115, Nr 3, pp. 580-582 (USSR).

ABSTRACT

This method of deposition on the basis of tin are of considerable interest to electroplating. Coatings with such alloys are distinguished by a number of valuable properties, some of which are utilized in industry with good results as protective and protective and decorative coatings on steel products. This new method, mentioned in the title, where the alloy contains up to 65% of tin, possesses a practical as well as a theoretical importance. Apart from its resistance to diluted mineral acids, the coating emerges from the trough with a glossy surface and a nice pink shade, making any polishing unnecessary. The coating consists of 35% Ni and 65% SN and forms an intermetallic compound, which can only be produced by electrolysis. The composi= tion of the electrolyte and the electrolysis conditions are given:

 $2, L = 2,5 \text{ N NiCL}_{2} + 0, L = 0,5 \text{ N SnCL}_{2} + 7 \text{ N NaF} + 1,0 N NH_{h}F;$

card 1/3

pH = 4,0 - 4,5. Temperature of the electrolyte 45 - 55°C. Current

20-3-44/59

Note on the Electrolytic Deposition of a Tin-Nickel Alloy from Chloride-Fluoride Solutions.

density 0,5 = 4,0 A/dm². The production efficiency with respect to current amounts to 96-98%. Anode surface relation. $S_{\rm Sn}$: $S_{\rm Ni}$: 1 . 2c. The average anodic current density 0,5 - 1,0 A/dm² over the total surface of the anodes. By the addition of flucric salts of sodium and of ammonium to the chlorous electrolyte the cathodic postentials of the tin separation reach more negative values than those of nickel in the identical solution. This apparently takes place because of the formation of solid complex ions SnF and SnCl_2F2,

which need a higher activation energy for discharge. The presence of fluoride effects an approach of the potentials of tin and nickel, which enables them to be deposited simultaneously at the cathode. This is proved by the so-called decomposition curves (fig. 1). A considerable depolarization takes place which, apparently is dependent upon a diminuition of the free energy at the formation of the chemical compound, that is the Sn-Ni- alloy. The investigations of the authors have shown, that the composition of the alloy is little dependent on the Sn- and Ni- concentration in the electrolyte and on the character of the cation of the fluoric acid, which, however, is of great importance in the modification of the physico-chemical properties of the deposits. The range of current density, where glossy deposits are

Card 2/3

20-3-44/59

Note on the Electrolytic Deposition of a Tin - Nickel Alloy from Chloride - Fluoride Solutions.

produced, depends on the temperature and on the pH-value of the electrolyte. The interval of permissible current densities shrink with the increase of both. Operating codes were worked out for a diminished Sn- content and for a.c.coatings and for current reversion. The two latter factors had almost no influence on the composition of the deposit, they impaired, however, its quality to a considerable extent. There are 2 Slavic references and 1 figure.

ASSOCIATION: Moscow Chemical-Technological Institute imeni D. I. Mendeleyev

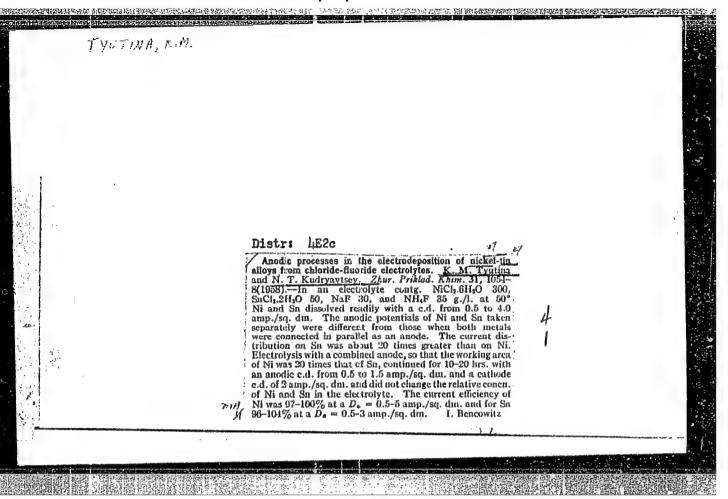
(Moskovskiy khimiko-tekhnologicheskiy institut im. D. I. Mendeleyeva)

PRESENTED: By A. N. Frumkin, Academician, January 23, 1957.

SUBMITTED: November 20, 1956.

AVAILABLE: Library of Congress.

Card 3/3



AUTHORS:

Kudryavtsev, N. T., Tyutina, K. M.

SOV / 156-58-3-8/52

TITLE:

The Cathodic Polarization in the Electrolytic Separation of a Tin-Nickel Alloy (Katodnaya polyarizatsiya pri elektro-

osazhdenii splava olovo-nikel')

PERIODICAL:

Nauchnyye doklady vysshey shkoly, Khimiya i khimicheskaya

tekhnologiya, 1958, Nr 3, pp. 435 - 438 (USSR)

ABSTRACT:

The presence of sodium and ammonium fluoride increases the cathode potential of tin to the point where it approaches the separation potential of nickel from chloride solutions. The potential in the simultaneous separation of tin and nickel at the cathode is a higher positive quantity than the potentials in the individual separation of tin and nickel. The course of the polarization curves in the separation of the alloy and its constituent parts from chloride-fluoride solutions was traced: based on an analysis of these curves it was found that the simultaneous deposition of tin and nickel on the cathode is accompanied by a considerable depolarization.

The nature of the polarization was investigated according to

various methos (suggested by Vagramyan and Gorbachev). It

Card 1/2

是"在在公司的自己。"我们在大人是写到的"E.J. 开发长生的有效。"

The Cathodic Polarization in the Electrolytic Separation SOV/156-58-3-8/52 of a Tin-Nickel Alloy

turned out that mainly chemical polarizations were concerned. This is due to the fact that the complex ions of the deposited metals are very stable. The experimental results obtained are illustrated in diagrams. They show the cathodic polarization in the electric separation of tin, nickel and the Sn-Ni-alloy (Diagrams 1 and 2); furthermore, the change of the cathodic potential with the period of electrolysis (Diagram 3), and the dependence of the $\lg J$ on $\frac{1}{T}$ at constant polarization

values (Diagram 4). There are 4 figures and 4 references, 3 of which are Soviet.

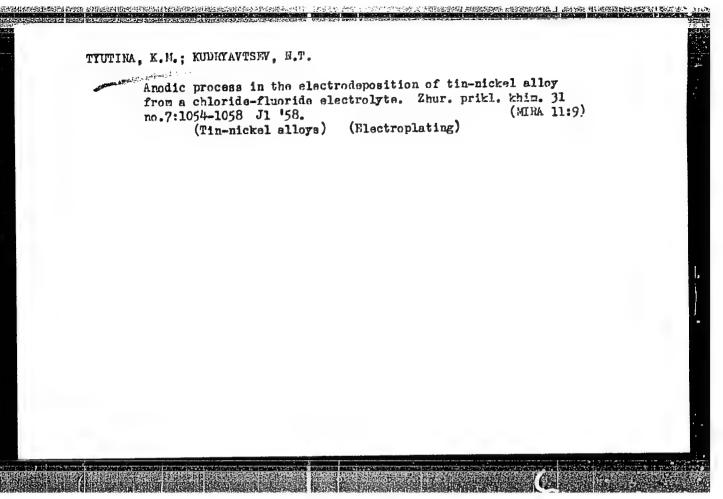
ASSOCIATION:

Kafedra ekhnologii elektrokhimicheskikh proizvodstv Moskovskogo khimiko-tekhnologicheskogo instituta im. D.I.Mendeleyeva(Chair for the Technology of Electrochemical Industries at the Moscow Chemical and Technological Institute imeni D.I.Mendeleyev)

SUBMITTED:

January 29, 1958

Card 2/2



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	8	. Soweshchaniye po elektrokhimii. 4th, Moscow, 1956.	Trudy; sporntk (Transactions of the rout)	Manue. Maltorial Board: A.M. Frunkin (Resp. Ed.) Academician, O.A. Yesin, Editorial Board: A.M. Frunkin (Resp. Secretary), S.M. Kabanov, Professor, S.I. Zhdanov (Resp. Secretary); B.M. Kabanov, Frickssor, Ye. M. M. Mologykin, Doctor of Chemical Sciencesy V.V. Losev, F.D. Likovicev, Frofessor, S.A. Solovyvevs, V.V. Stender, Professor; Likovicev, F.D. A. Solovyvevs, V.V. Stender, Professor; and G.M. Fibriahing Kouses M.G. Yegorov; and G.M. Fibriahing Kouses M.G. Yegorov;	FURFOSE: This book is intended for chemical and electrical engi- neers, physicists, metallurgists and researchers interested in	COVERAGE: The book contains 127 of the 138 reports presented at the Fourth Conference on Electrochemistry sponsored by the Department of Chamical Sciences, and the Institute of Physical Chemistry Academy of Sciences, USSR, The collection partains to different branches of electrochemists freeting couble layer theories and galvanic processes in metal statisfoleposition and industrial electrochemists.	relysis. Abridged discussions are given at the end of each division, sion. The asjority of reports not included here have been published in periodical literature. No personalities are mentic References are given at the end of most of the articles.	Polukarov, Mt. M., and K.M. Gorbunova (Institute of Physical Chemistry, Academy of Sciences, USSR), Some Theoretical Problems on the Electrocrystallization of Alloys	_Audubert_R. (Deceased) (France), Mechanism of Anode Dis-	Suryagina, A.A., and K.M. Gorbunova (Institute of Physical Chemistry, Academy of Sciences, USR), Some Regularities of the Electrocystallization of Metals Under the Influence of an Albertaing Current		Baymakow-Yw-W-Eineties of the Joint Discharge of Ions During the Electrolytic Deposition of Metals	Transactions of the Pourth Conference (Cont.) SGY/2216	Kudryavener, N.T., and K.M. Tyuting (Institute of Chemical Technology Imeni D.T. FARGeleyer). Gathodic Polarization During the Electrodeposition of a Tin-Wickel Alloy	Engyfets, V.L., and A.L. Rotinyan (Froyekinyy i nauchno- lasledowatel-skity institut nitedepsy, Veobi twoys to livey- annoy prographennosi-Planing and Scientific Research Institute of the Nickel, Cobalt and Tin Industry). Joint Discharge of Ions and the Problem of Obtaining Metals of High Purity		Imagiow, A.V. (Institute of Chemical Technology iment D.1. Mendeleyev). Kinetics of Cathodic Processes During the kleetrodeposition of Metals Pros Aqueous Solutions	Card 18/34	
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PHASE I BOOK EXPLOITATION

SOV/3161

Nauchno-tekhnicheskoye obshchestvo mashinostroitel'noy promyshlennosti, Kiyevskoye oblastnoye pravleniye

Zashchitno-dekorativnyye i spetsial'nyye pokrytiya metallov (Protective, Decorative, and Special Coatings for Metals) Kiyev, Mashgiz, 1959. 291 p. 4,200 copies printed.

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PURPOSE: This book is intended for technical personnel in the field of protective coatings for metals.

COVERACE: The papers in this collection, presented at a conference of the NTO Mashprom held in Odessa, deal with the mechanization and acceleration of metal-coating and plating processes performed by spraying, electrolytic, and other methods. Quality control of protective coatings is also discussed. No personalities are mentioned. References follow several of the papers.

Card 1/7

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Protective, Decorative, and Special Coatings for Metals SOV/3161	
TABLE OF CONTENTS:	
Preface	3
Kudryavtsev, N. T., Doctor of Technical Sciences, and K. M. Tyutina, Candidate of Technical Sciences (Moscow). Electrolytic Deposition of Tin-Nickel Alloy From Chloride-Fluoride Solutions	5
Dvoyrin, Ya. D., Engineer. Electrolysis of Tin From Solutions Containing Hydrochloric Acid	14
Shreyder, A. V., Candidate of Chemical Sciences, and M. A. Figel'man, Engineer (Moscow). Investigation of Steel Brittleness Under Cathodic Treatment and Electroplating	21
Likhacheva, T. V., Engineer (Khar'kov). Application of High-luster Nickel Plating in Mass Production	37
Savel'yeva, A. I., Candidate of Chemical Sciences, and G. S. Chernobrivenko (Moscow). New Electrolyte for High-luster Nickel Plating	45
Card 2/7	

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Improving the anticorrosive and decorative properties of zinc coatings by alloying them with nickel. Trudy MKHTI no.26:96-104 159. (MIRA 13:9)

(Nickel-zinc alloys)

KUDRYAVTSEV, N.T.; TYUTINA, K.M.; BARABOSHKINA, N.K.

Electrodeposition of the alloy tin-bismuth. Trudy MKHTI no.26:113(MIRA 13:9)

(Tin-bismuth alloys)

KUDRYAVISEV, N. T.; TYUTINA, K.M.; YARLYKOV, M.M.

Electrodeposition of the alloy tin-antimony. Trudy MEHTI no.26:120-127 '59. (MIRA 13:9)

KUDRYAVTSEV, N.T.; TYUTINA, K.M.; MIKHAYLOV, N.I.; GLAZUNOVA, V.K.

Causes of the formation of dark spots on the surface of zinc plated parts. Izv.vys.ucheb.zav.; khim.i khim tekh. 3 no.1: 166-169 '60. (MIRA 13:6)

1. Kafedra elektrokhimii Moskovskogo khimiko-tekhnologicheskogo instituta imeni D.I. Mendeleyeva.

(Zinc plating)

(Zinc-Corrosion)

KUDRYAVTSEV, N.T.; TYUTINA, K.M.; CHVANKIN, I.V.

Determining the thickness of tin-nickel coatings. Zav.lab. 26
no.3:301-302 '60.
(Tin-nickel alloys)

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AUTHORS:

Kudryavtsev, N.T., Tyutina, K.M., Chvankin, I.V. and

Tsupak, T.Ye.

TITLE:

Electrodeposition of a Sn-Ni alloy from alkaline cyanide

solutions

SOURCE:

Moscow. Khimiko-tekhnologicheskiy institut. Trudy, no. 32,

1961. Issledovaniya v oblasti elektrokhimii, 283-288

TEXT: A study of the joint deposition of Ni and Sn from stannate solutions containing additions of complex Ni cyanide. The influence of Ni concentration in the solution and of current density, $\mathbf{D}_{\mathbf{R}^3}$ on the quality,

composition and current efficiency of the alloy were studied at 65°, 75° and 85°C, depositing the metals on brass or Ti plates. Cathode potentials at various D is were measured during the denomination of the state at various $D_{\mathbf{k}}^{\beta}$'s were measured during the deposition of the alloy and of

Sn alone. Alloys with 10-26% Ni could be obtained from solutions containing $0.12 \approx 0.6$ g Ni/1, 53 g Na₂SnO₃/1 and 10 g NaOH/1, (alloys of

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S/539/61/000/032/013/017 D204/D301

Electrodeposition of a Sn-Ni ...

20-26% Ni were bright), but the current efficiency fell sharply on increasing the Ni and lowering the Sn content in the electrolyte and at lower temperatures. Thus on increasing Ni from 0.06 to 0.6 g/l at $75^{\circ}\mathrm{C}_{9}$ at $\mathrm{D_{k}} = 1$ amp/dm², the current efficiency decreased from 65 to 8%,

A proportion of Ni in the deposit rose with increasing Ni content of the solution, but was practically unaffected by changes in temperature or D_k oction of the alloy was more pronounced Cathode polarization in the deposition of the alloy was more pronounced than during the deposition of Sn alone. The results are discussed in than during the deposition curves derived for the various processes taking terms of the polarization curves derived for the various processes taking place, concluding that the joint deposition of Ni and Sn facilitates the evolution of H₂ by reducing its overvoltage on the cathode. Passivated Sn anodes or anodes of Sn and an insoluble metal were found suitable and the following conditions are recommended for the deposition of an alloy containing 5-12% Ni: electrolyte composition - Sc (as Na₂SnO₃) 30g/l₉ Ni

(as Ni(CN)₂) 0.06 - 0.12 g/1, NaOH 10 g/1, NaCN 0.25 g/1; temperature 75°C; $D_{\rm k}$ equal to 1 amp/dm². Analyses of the electrolyte and of the

Card 2/3

S/539/61/000/032/013/017 Electrodeposition of a Sn-Ni... D204/D301

deposits are described in some detail. There are 6 figures, 1 table and 3 references: 2 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: J.W. Cuthbertson, No Parkinson and H.P. Rooksby, J. Electrochem. Soc., 100, 3, (1953).

Card 3/3

S/539/61/000/032/014/017 D204/D301

AUTHORS:

Kudryavtsev, N.T., Tyutina, K.M. and Baraboshkina, N.K.

TITLES

The effects of organic additives on the cathode process in

the electrolysis of Sn-Ni alloys

SOURCE:

Moscow. Khimiko-tekhnologicheskiy institut. T_1udy_9 no. 32_9

1961. Issledovaniya v oblasti elektrokhimii, 289-292

TEXT: Continuation of earlier work, inspired by Soviet and Western inconstigations which showed the addition of surface active organic compounds could influence the composition and quality of alloys deposited from electrolytes containing more than I metallic salt. Additions of pophenyl subspheric acid (I) prepared from (a) freshly distilled phenol, (b) chemically pure synthetic phenol, (c) technical phenol and (d) crude carbolic acid, were made to the electrolyte consisting of 300 g/l NiCl₂·6H₂O₂

50 g/l SnCl₂6H₂O and 60 g/l NH₄F, to investigate their effects on the quality and composition of the deposit and on the cathodic polarization.

Card 1/2

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The effects of organic ...

The additions were made at 50~65°C, at rH 4.5. It was found that the cathodic polarization, quality and composition of the deposits depended on the purity of the phenol from which I was prepared. Additions of I prepared from freshly distilled or chemically pure phenol had practically prepared from freshly distilled or chemically pure phenol displaced no effect. 0.5—0.7 moles/l of I prepared from technical phenol displaced the electrodeposition potentials in the electronegative direction by 100-200 mv and lowered the Sn content in the alloy by 11-14% (to 51-54%), with current densities of 0.5—4.0 amp/dm². The deposits were shiny and with current densities of 0.5—4.0 amp/dm². The deposits were shiny and elastic. Raising the temperature to 55-65°C further decreased the Sn to 49-50%. The effect of I prepared by the sulphonation of crude carbolic acid increased the cathodic polarization by 400 mv during the deposition of Sn and, thereby, lowered the latter to 20% in the alloy; the deposits of Sn and, thereby, lowered the latter to 20% in the alloy; the deposits were gray when the current density exceeded 0.2 amp/dm². The addition of lower gray when the current density exceeded 0.2 amp/dm². The addition of lower gray when the current density exceeded 0.2 amp/dm². The addition of lower gray when the current density exceeded 0.2 amp/dm². The addition of lower gray when the current density exceeded 0.2 amp/dm². The addition of lower gray when the current density exceeded 0.2 amp/dm². The addition of lower gray when the current density exceeded 0.2 amp/dm². The addition of lower gray when the current density exceeded 0.2 amp/dm². The addition of lower gray when the current density exceeded 0.2 amp/dm². The addition of lower gray when the current density exceeded 0.2 amp/dm². The addition of lower gray when the current density exceeded 0.2 amp/dm². The addition of lower gray when the current density exceeded 0.2 amp/dm². The addition of lower gray when the current density exceeded 0.2 amp/dm².

Card 2/2

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Kudryavtsev, N. T., Tyutina, K. M. and Firger, S. M. AUTHORS:

TITLE:

Protecting steel articles against corrosion with an

electrolytic zinc-nickel coating

PERIODICAL:

Zhurnal prikladnoy khimii, v. 35, no. 5, 1962, 1035-

1043

TEXT: Cathodic codeposition of Ni and Zn was studied from cyanide (I) and ammoniacal (II) solutions, obtaining alloys containing 0.5 - 2% Ni from the first electrolyte and 10 - 30 (or more)% Ni 0.5 - 2% Ni from the first electrolyte and 10 - 30 (or more) NI from the second. The following conditions are recommended for the production of high quality coatings (~2% Ni) from I: Electrolyte - 2% (as a complex) 32 g/l, NaCN 75 - 100 g/l, NaOH 70 g/l, Ni (as cyanide) 0.025 - 0.75 g/l; temperature - 20 - 25°C; current density (D) - 1 - 3 amp/dm². The corresponding current efficiencies were 80 - 96% and the anodes were pure Zn. The Ni content of the deposit increased with increasing Ni concentration in the electrolyte and fell with increasing D. Electrolyte II was investigated in

Card 1/2

S/080/62/035/005/006/015 D204/D307

Protecting steel articles ...

greater detail since deposits containing 10 - 20% Ni were found to be the best protection against corrosion. It was found that the Ni content in the alloy increased with temperature and pH and depended on the Ni concentration in II and on D as in the case of I. Best quality deposits containing 10 - 18% Ni were obtained at 40°C and at pH 6.5 - 6.8 from a solution containing 15 g ZnO, 12 - 36 g NiCl₂.6H₂O, 250 g NH₄Cl and 20 g H₃BO₃ per liter, at a cathode current density of 1 - 3 amp/dm². The cathode current efficiency was 95% under these conditions and the anodes were Zn or Zn/Ni. Solution II was sufficiently stable w.r.t. composition and showed good buffer properties at pH 6 - 10. Pitting of the deposits could be partially alleviated by the addition of various organic compounds to the electrolyte, but was best avoided by stirring the solution during electrolysis. There are 2 figures and 2 tables.

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S/123/62/000/006/011/018 A004/A101

AUTHORS:

Kudryavtsev, N. T., Tyutina, K. M.

TITLE:

Electrodeposition of tin-nickel alloys

PERIODICAL:

Referativnyy zhurnal, Mashinostroyeniye, no. 6, 1962,43, abstract 6B214 (V sb. "Elektrolit. osazhdeniye splavov". Moscow, Mashgiz,

1961, 76-93)

The authors analyze the composition of electrolytes and operating conditions for electrodeposition of tin-nickel alloys from acid chloride-fluoride and alkaline electrolytes. The authors recommend the following composition for Sn-Ni alloy coatings from chloride-fluoride electrolytes containing 65% Sn (in g/l): nickel chloride - 250 - 300 (2.1 - 2.5 n); tin chloride SnCl₂·2H₂O -45 - 50 (0.4 - 0.5 n); sodium fluoride NaF - 30 (0.7 n); ammonium fluoride NH₄F - 35 - 38 (1.0 n), with a pH-value of 4.5 - 5, at a temperature of 45 - 55°C and a cathode current density of 0.5 - 4.0 amp/dm². The anodes are of tin and nickel with a surface ratio from 1:10 to 1:20. The mean anode current density amounts to 0.5 - 1.0 amp/dm² of the total anode surface. For Sn-Ni alloy coatings with a reduced tin content (approximately50% Sn) the authors suggest

Card 1/2